California Regional Water Quality Control Board

Los Angeles Region

Recipient of the 2001 *Environmental Leadership Award* from Keep California Beautiful

Alan C. Lloyd, Ph.D.
Agency Secretary

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Arnold Schwarzenegger
Governor

December 22, 2005

Mr. Ronald J. Dow, Director, Environmental Division
Naval Base Ventura County
311 Main Rd., Suite 1
Point Mugu, CA 93042

RESCISSION OF CLEANUP AND ABATEMENT ORDER NO. 98-017 - NAVAL BASE VENTURA COUNTY, POINT MUGU FACILITY (SLIC NO. 282, PCA NO. 16548)

Dear Mr. Dow:

Los Angeles Regional Water Quality Control Board (Regional Board) staff have reviewed your March 7, 2005 letter in which you state that it is your belief that the Navy has completed all requirements of Regional Board Cleanup and Abatement (CAO) Order No. 98-017 (copy attached). Naval Base Ventura County was issued CAO No. 98-017 because of repeated unauthorized discharges of raw sewage either into unlined ponds adjacent to Mugu Lagoon, onto roads and waterways adjacent to Mugu Lagoon, or directly into Mugu Lagoon or its tributaries, during rain events. These actions were in violation of California Water Code Sections 13350 and 13385.

The CAO required cleanup and abatement of the condition of surface water pollution and threatened pollution caused by the release of raw sewage. There were seven specific and detailed tasks to achieve this requirement. Each task and the status of each task is provided below:

1. Complete emergency repair of the pipeline connecting the base sanitary sewer system with the unlined ponds by February 20, 1998, and maintain a functional pipeline. This work was completed in February 1998. Replace the emergency repair of the pipeline connecting the base sewer line with a permanent line that is structurally secured. This work was completed in November 1999.

2. Complete installation of an impermeable emergency storage basin with permeability not greater than 10^{-7} centimeters per second. This work was completed in February 1999.

3. Implement a water-monitoring program for emergency discharges into unlined pond No.1. No emergency discharges into pond No. 1 shall be allowed after April 15, 1998, unless prior approval is granted by the Executive Officer. The emergency discharges are limited to overflow within the base sanitary sewer system during heavy storm periods. Sewage shall be disinfected prior to emergency discharges. Water samples shall be collected from the base sanitary sewer system before each discharge and from pond No. 1 after each discharge. Water samples shall be analyzed for total dissolved solids, total suspended solids, total organic carbon, ammonia, nitrate, nitrite, organic nitrogen, oil and grease, biological oxygen demand, coliform bacteria, cadmium, chromium, copper, lead, nickel, silver, zinc, cyanide, volatile and organic compounds (with EPA methods 624 and 625). The monitoring program was in place and complied with during the few months that it was required, prior to the construction and operation of the storage basin noted in Item No. 2.

4. Complete a phased cleanup and abatement program. The cleanup of any remaining surface contamination, including sludge in unlined ponds, and the abatement of impacts to downstream watershed resources shall take priority. Since the ponds are within the tidal influence area and groundwater is connected to surface water, a groundwater assessment beneath three unlined ponds shall

be conducted to evaluate any potential impacts to surface water beneficial uses including warm water habitat. If the groundwater data demonstrate that the sludge has impacted groundwater, a remedial action plan shall be proposed to address the sludge and groundwater contamination. This remedial action plan shall evaluate sludge management options for sludge in pond No. 1, which is not suitable for beneficial reuse in wetland creation due to elevated metal concentrations. If the wetland restoration project using onsite sludge is not successful, sludge in the three unlined ponds shall be removed and properly disposed of off site. The results of groundwater sampling were presented in an October 1999 report, and indicated that the materials in groundwater near the sewage ponds were the same as those found elsewhere at the base. It was determined by sampling groundwater, surface water, soil, and plant and animal tissues that the materials in the sewage sludge did not represent a health risk and promoted the growth of native vegetation when the pond berms were breached, and the floors of the ponds were graded so that tidal flow could enter and move over the pond floors.

5. Complete a phased upgrade of the base sanitary sewer system, to permanently mitigate infiltration and inflow to an acceptable volume. This was done in phases that were completed to the extent that greatly reduced uncontrolled inflow into the sewer system by 2003, although additional upgrades were conducted through July 2005.

6. The tasks in items 1 through 5 must be conducted in compliance with the schedule attached to the CAO, as modified from time to time with approval of the Executive Officer. This requirement was met.

7. Submit technical reports in compliance with the schedule attached to the CAO, as modified from time to time with approval of the Executive Officer. This requirement was met within modified deadlines as apporved. by the Regional Board.

As part of the CAO rescission process, Regional Board staff reviewed the following:

- *Salt Marsh Restoration in Mugu Lagoon Sewage Ponds: 1998 Progress Report*: 1999, University of California, Los Angeles
- *Final Report, Repair and Maintenance of Sewer Lines Connecting Collection System to Unlined Ponds:* 1999, Department of the Navy
- *Final Report, Emergency Storage Basin:* 1999, Department of the Navy
- *Site Assessment and Cleanup: 1999 Synopsis:* 1999, Department of the Navy
- *Annual Progress Report, NAS On-Site Sanitary Sewer System Upgrade:* 1999, Department of the Navy
- *Salt Marsh Restoration in Mugu Lagoon Sewage Ponds: 1999 Progress Report*: 2000, University of California, Los Angeles
- *Navy Base Ventura County, Mugu Lagoon Wetland Restoration Monitoring Report, Year 2000*, 2002, University of California, Los Angeles
- *Salt Marsh Restoration in Mugu Lagoon Sewage Ponds: Summary of Work Done in 2001*: 2001, University of California, Los Angeles

- *Salt Marsh Restoration in Mugu Lagoon Sewage Ponds: 2002-2003 Progress Report*, 2003, University of California, Los Angeles
- *NAWS On-Site Sanitary Sewer System Upgrade Report:* 2003, Department of the Navy
- *Salt Marsh Restoration in Mugu Lagoon Ponds: 2004 Progress Report*, 2005, Department of the Navy

Following review of the reports noted above and additional information in the file, and following December 14 and 21, 2005 telephone conversations with Mr. Steve Granade of your staff, the Regional Board concurs that all activities required under the CAO Order No. 98-017 are complete and no further action is required. The CAO No. 98-017 is rescinded.

If you have any questions, please contact Peter Raftery at (213) 576 - 6724.

Sincerely,

Jonathan Bishop
Executive Officer

Enclosure: Cleanup and Abatement Order No. 98-017

cc: Peter Chen, DTSC, Cypress
Christine Bucklin DTSC, Glendale
Patty Velez, California Department of Fish and Game
Steve Granade, Naval Base Ventura County, Point Mugu

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

CLEANUP AND ABATEMENT ORDER NO. 98-017

REQUIRING THE NAVAL AIR WEAPONS STATION - POINT MUGU TO CLEANUP AND ABATE CONDITIONS OF WATER POLLUTION CAUSED BY DISCHARGES OF RAW SEWAGE

The California Regional Water Quality Control Board, Los Angeles Region, finds:

1. The US Department of the Navy (hereinafter Navy) operates a Naval Air Weapons Station (hereinafter NAWS) at Point Mugu. Industrial wastewaters from NAWS are generated by operations at a healthcare clinic, photography laboratory, wash racks, vehicle and aircraft maintenace, fuel storage and transfer areas, engine testing areas, and other industrial activities related to the testing and maintenance of aircrafts and missiles. Domestic wastewaters from NAWS are generated from approximately 10,000 employees and/or residents at NAWS. Together, industrial and domestic wastewaters average 350,000 gallons per day, and are collected in a sanitary sewer collection system on NAWS that is owned and operated by the Navy.

2. From 1974 to 1979, the Navy treated and discharged municipal and industrial wastewaters under NPDES Permit No. CA0110183, issued by the US Environmental Protection Agency on December 31, 1974. Onsite wastewater treatment consisted of comminution and primary solids removal by an Imhoff Tank with a maximum capacity of 500,000 gallons per day, followed by oxidation in three unlined ponds. The three unlined ponds encompass an area of approximately 37 acres, and groundwater underlies the ponds at a depth of two to four feet. Following oxidation, treated wastewaters were discharged to Mugu Lagoon.

   NPDES Permit No. CA0110183 expired on December 10, 1979.

3. In 1979, the Regional Board issued Enforcement Order No. 79-105, requiring the Navy to cease discharges to Mugu Lagoon no later than November 1, 1979. As of that date, the Navy was required to complete hookup to a sanitary sewer system operated by the City of Oxnard, and to discharge all wastewaters from NAWS to Oxnard's sanitary sewer system for treatment at the City of Oxnard Sewage Treatment Plant.

4. Before the end of 1979, the Navy complied with Enforcement Order No. 79-105 by completing hookup of the NAWS 8-mile sanitary sewer system to the Oxnard sanitary sewer system, and discharging wastewaters to the City of Oxnard Sewage Treatment Plant. However, the 8-inch NAWS sewer line connected to the City of Oxnard's sewer system has a capacity of 800,000 gallons per day, which is not adequate for collection during heavy storm periods, due to infiltration and inflow of runoff into the NAWS sanitary sewer system. During heavy storms, NAWS' sanitary sewer system is usually flooded, as most of the sewer lines are below the water table. When co-mingled wastewaters and stormwaters exceed 600,000 gallons per day,

the Navy has been discharging untreated wastewater to the three unlined ponds. The wastewater flow during the heavy storm periods consists of approximately 5-30% of raw sewage and approximately 70-95% of storm water due to infiltration, depending upon the magnitude of the storm.

5. The Navy also had an NPDES permit (No. CA0058700), issued by the Regional Board on November 29, 1978, which allowed for discharge of up to 18,000 gallons per day of water softener regeneration brine, rinse water, and filter backwash wastewaters from the regeneration of water softening equipment. As the water softening equipment was decommissioned, the Regional Board rescinded this permit on January 27, 1997.

6. On September 6, 1994, the Navy provided verbal notification to the Regional Board of unauthorized discharges, which had been on-going during many storm periods since 1979. At that time, staff representing the Navy provided assurances that discharges to the unlined ponds would cease, that a report containing results of a preliminary assessment completed at the unlined ponds would be provided by the end of November 1994, and that specific plans would be provided for drainage of the ponds, removal of all accumulated sludge wastes, and site restoration.

7. On December 27, 1994, the Navy submitted a "Sewage Oxidation Pond Study", dated November 1994, prepared by CH2M Hill, which indicated the following:

   a. An estimated 100,000 gallons per day of municipal and industrial wastewater seeps/percolates through the bottom of the unlined ponds.

   b. The thickness of sludge wastes that have accumulated in the three unlined ponds ranges from 1.1 feet to 3.3 feet in depth. Volume of the accumulated sludge is estimated at 131,334 cubic yards.

   c. Ongoing percolation and/or seepage of partially-treated, undisinfected sewage to shallow groundwater is a potential threat to groundwater quality, an environmental hazard to fish, birds, and other wildlife, and a nuisance that must be prevented from occurring.

   d. The unlined ponds used for oxidation of wastewaters should be drained, all accumulated sludge should be removed or reused for wetland creation if appropriate (most of sludge in three ponds met land application requirements, except some sludge samples collected from Pond No. 1 with metal concentrations exceeding concentrations specified in 40CFR, Part 503, Subpart B, for the use of sewage sludge in land application), and a plan for wetlands restoration for that portion of Mugu Lagoon should be developed.

8. On March 31, 1995, Regional Board staff conducted a site inspection and verbally directed the Navy to immediately cease all discharges to the three unlined ponds, as such discharges were unauthorized.

9. In a letter dated August 31, 1995, the Navy advised the Regional Board that they had discontinued oxidation operations at the unlined ponds and drained the ponds. As stated in

that letter, the Navy will not use the ponds, except under extreme emergency conditions. In the event of such an emergency, the Navy will notify the Regional Board immediately with specific information including volume discharged, time, date, explanation for an emergency, and corrective actions taken. The letter further stated that the Navy had requested funding for an emergency wastewater storage basin (to replace the unlined ponds), for repairing the sewage pond bridge for improved access to the ponds, and for the removal of the sludge in the ponds.

10. In a letter dated April 2, 1996, Regional Board staff notified the Navy that discharges to the unlined ponds are a violation of the California Water Code and may be subject to enforcement action. The letter further directed the Navy to complete installation of an emergency wastewater storage basin by October 31, 1996. The Navy did not comply with this requirement, as Navy staff represented that they needed more time to procure funding for an emergency wastewater storage basin. Accordingly, in a letter dated August 9, 1996, the Regional Board extended the installation completion date to October 31, 1997.

11. On November 6, 1997, the Regional Board issued a Section 401 Water Quality Certification waiver to the Navy, allowing for a Pilot Wetland Creation Project at one of the three unlined ponds (i.e. Pond No. 3). The actual construction in Pond No. 3 started in November 1997. Planting at the restoration pilot project will be in November 1998. The Navy expects to complete the pilot project within 18 months, from November 1998 to May 2000. Pending success of this pilot project, the Navy will restore additional wetlands at NAWS over a three and a half-year period. This Wetland Creation Project will not only restore the salt marsh habitat but also provide beneficial reuse of sewage sludge accumulated in three unlined ponds.

12. In a letter dated December 3, 1997, Regional Board directed the Navy to submit a technical report, due on December 15, 1997, regarding unauthorized discharges that have occurred at NAWS. The letter further stated that unauthorized discharges may be subject to administrative civil liability.

13. In a technical report dated December 15, 1997 and in subsequent spill reports, the Navy reported the following unauthorized discharges to the unlined ponds since September 1997, as listed below:

Date	Volume (gallons)	Cause
9/3/97- 9/7/97	994,000	critical repairs to the main force line
12/5/97	228,000	infiltration of storm water into sewers
12/18/97	14,000	infiltration of storm water into sewers
2/3/98	1,267,000	infiltration of storm water into sewers
2/6/98	96,000	infiltration of storm water into sewers
2/23/98	1,242,000	infiltration of storm water into sewers

All of the above spills resulted from stormwater inflow and infiltration into the NAWS sanitary sewer system, during storm periods, except for the spill from September 3 through September 7, 1997. The spill from September 3 through September 7, 1997 occurred as the Navy was repairing main force line and was a planned discharge. However, the Navy did not provide any notification or make any effort to monitor this spill of 994,000 gallons during the planned main

force line repair, which is not acceptable (as stated in the Regional Board's letter dated December 3, 1998).

14. During a site inspection on February 10, 1998, the Navy informed Regional Board staff of a break in a sewer pipe connecting the NAWS sanitary sewer system to the unlined ponds used to contain co-mingled wastewaters and stormflows during emergency storm periods. The break occurred when a bridge over Calleguas Creek, from which the sewer pipe was suspended, washed out on February 6, 1998. As a result of this break, co-mingled wastewaters and stormflows in the NAWS sanitary sewer system that exceeded the capacity of the NAWS' connection to the Oxnard sanitary sewer system, and that would have been directed to the unlined ponds (during storm periods), overflowed into streets, adjacent storm drains, and downstream waterbodies at NAWS on the dates below:

Date	Volume (gallons)
2/6/98-2/8/98	940,000
2/14/98	8,952
2/23/98*	20,000*

* Although the emergency repair was completed on February 20, 1998, another spill of raw sewage occurred during a storm on February 23, 1998. This spill occurred because a wastewater operator delayed discharging emergency overflows to the unlined pond for more than one hour while waiting for approval from a supervisor, to ensure that the sewerpipe across Calleguas Creek was functional. As a result, 20,000 gallons of sewage was discharged from 12:00p.m. to 1:25p.m.

During the site inspection on February 10, 1998, Regional Board staff verbally directed the Navy to repair the broken sewer pipeline connecting the NAWS sanitary sewer system to the unlined ponds as soon as possible. The Navy completed emergency repairs on this sewer pipeline on February 20, 1998.

15. The discharge of raw sewage into unlined ponds, streets, storm drains, and waterbodies at and downstream of NAWS is a violation of California Water Code Sections 13350 and 13385.

16. The Regional Board adopted an amended *Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties (Basin Plan)* on June 13, 1994. *The Basin Plan* designates beneficial uses and establishes water quality objectives waters for inland surface waters, ground waters, coastal waters, and wetlands.

17. Beneficial uses designated for Mugu Lagoon and the coastal area include, but are not limited to: warm water habitat, estuarine habitat, marine habitat, wetland habitat, wildlife habitat, preservation of biological habitats, rare, threatened, or endangered species, migration of aquatic organisms, spawning, reproduction, and/or early development, and water contact and noncontact recreation. Groundwater underlying NAWS is in hydraulic connection with surface waters supporting beneficial uses.

18. This Order is an action taken for the protection of the environment and, as such, is exempt from the provisions of the California Environmental Quality Act in accordance with California Code of Regulations, Title 14, Chapter 3, Section 15321.

IT IS HEREBY ORDERED, pursuant to Water Code Section 13304, that the Navy's operations at the Naval Air Weapons Station at Point Mugu shall comply with the following:

1. Cleanup and abate the condition of surface water pollution and threatened pollution caused by the release of raw sewage by implementing the following actions:

   a. Complete emergency repair of the pipeline connecting the NAWS sanitary sewer system with the unlined ponds by February 20, 1998 and maintain a functional pipeline.

      Replace the emergency repair of the pipeline connecting the NAWS sewer line with a permanent pipeline that is structurally secured.

   b. Complete installation of an impermeable emergency storage basin with a permeability not greater than 10^{-7} cm/sec.

   c. Implement a water monitoring program for emergency discharges into unlined pond No. 1. Furthermore, no emergency discharge into pond No. 1 shall be allowed after April 15, 1998, unless prior approval is granted by the Executive Officer. The emergency discharges are limited to overflow within the NAWS sanitary sewer system during heavy storm periods. Sewage shall be disinfected prior to emergency discharges. Water samples shall be collected from the NAWS sanitary sewer system prior to each discharge and from pond No.1 after each discharge. Water samples shall be analyzed for total dissolved solids, total suspended solids, total organic carbon, ammonia, nitrate, nitrite, organic nitrogen, oil and grease, BOD, coliform, pH, metals (cadmium, chromium, copper, lead, nickel, silver, and zinc), total cyanide, chronic and acute toxicity, and organics by EPA methods 624 and 625.

   d. Complete a phased cleanup and abatement program. The cleanup of any remaining surface contamination, including sludge in unlined ponds, and the abatement of impacts to downstream watershed resources shall take priority.

      Since the site is located within the tidal influence area and groundwater is connected with surface water, a groundwater assessment beneath three unlined ponds shall be conducted to evaluate any potential impacts to surface water beneficial uses, including warm water habitat, estuarine habitat, marine habitat, wetland habitat, wildlife habitat, preservation of biological habitats, rare, threatened, or endangered species, migration of aquatic organisms, spawning, reproduction, and/or early development. If the groundwater data demonstrates that the sludge has impact to groundwater, a remedial action plan shall be proposed to address the sludge and groundwater comtamination. This remedial action plan shall also evaluate sludge management option for sludge in Pond No. 1, which is not suitable for beneficial reuse in wetland creation due to elevated metal concentrations.

      In the event that the wetland restoration project using onsite sludge is not successful, sludge in three unlined ponds shall be removed and properly disposed offsite.

   e. Complete a phased upgrade of the NAWS sanitary sewer system, to permanently mitigate infiltration and inflow to an acceptable level.

f. Conduct activities specified in Items a through e above, as necessary, according to the schedule of work shown in Attachment A, or subsequent revised time schedules submitted to, and approved by, the Executive Officer as the work proceeds.

g. Submit technical reports according to the schedule of work shown in Attachment A. The discharger may make application to change the frequency of reporting for Executive Officer approval.

The investigation and cleanup program shall be directed and conducted by a registered civil engineer or geologist. The assessment of impacts to beneficial uses shall be conducted by a biologist or other scientist possessing the necessary expertise.

2. This Order is not intended to stop or redirect any investigation or cleanup or remediation programs ordered by this Board or any other agency.

3. This Order in no way limits the authority of the Board, as contained in the California Water Code, to institute additional enforcement actions or to require additional investigation and cleanup pertinent to this project. This Order may be revised by the Executive Officer as additional information on this project becomes available. Upon request by the Navy, and for good cause shown, the Executive Officer may delete or extend the date of compliance for any action required of the Navy, under this Order.

4. The Executive Officer is authorized to take appropriate action, pursuant to Sections 13268 and 13350 of the Water Code against the Navy for any noncompliance with this Order including assessment of penalties in the amount of up to $5,000.00 per day for each day on which any technical data requested by this Cleanup and Abatement Order is not submitted.

5. If the Navy fails to comply with any provisions of this Order, the Executive Officer is authorized to request the Attorney General to take the appropriate action against the discharger, including injunction and civil monetary remedies, pursuant to appropriate California Water Code sections, including, but not limited to Sections 13304, 13350, 13385, and 13386.

Ordered by: _____ Dated: March 27, 1998
DENNIS A. DICKERSON
Executive Officer

/RC

ATTACHMENT A

		Date
1.	Repair and Maintenance of Sewer Lines connecting collection system and unlined ponds	
a.	Submit a report detailing the emergency repair completed by February 20, 1998	April 15, 1998
b.	Submit a workplan for permanent repair	June 1, 1998
c.	Complete installation of permanent repair	October 1, 1998
d.	Submit a final report	November 1, 1998
2.	Emergency Storage Basin	
a.	Submit a design plan	June 1, 1998
b.	Submit a progress report	August 1, 1998
c.	Complete installation	October 1, 1998
d.	Submit a final report	November 1, 1998
3.	Water Monitoring Program	
a.	Conduct water monitoring program	On each discharge day.
b.	Submit spill report and monitoring results	15th of each month, starting from March 15, 1998 to May 15, 1998.
4.	Site Assessment and Cleanup	
a.	Submit a work plan for groundwater investigation	June 1, 1998
b.	Submit a groundwater investigation report and propose a remedial action plan	November 1, 1998
c.	Submit annual progress report on wetland restoration project	January 1 of each year, starting January 1, 1999.
d.	Submit a final report to evaluate the restoration project and the need for offsite disposal of sludge	January 1, 2004
5.	NAWS On-site Sanitary Sewer System Upgrade	
a.	submit a work plan	July 1, 1998
b.	submit annual progress report	January 1 of each year, starting January 1, 1999.
c.	submit a final report	January 1, 2005